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(54) SPINDLE MOTOR AND DISK DEVICE USING THE SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To concentrate magnetic fluid to contact portions and to hold the magnetic fluid in a pivot part by constituting a shaft, the shaft ends of which are formed to a curvilinear form outward, and a thrust bearing for receiving this shaft of a magnetic material, adopting the magnetic fluid for lubricating fluid and constituting a magnetic circuit of the magnet, the thrust bearing 22 and the shaft.

SOLUTION: A bearing unit 1 is composed of a housing 21, the thrust bearing 22, a radial bearing 23, the magnet 25 for pressurization, a screw seal 26, a stopper ring 27, a spacer 28 and the magnetic fluid 29. The radial bearing 23 is press fitted to the inner side of the housing 21 and the shaft 3 is supported rotatably and the displacement in a radial direction is restrained by the inside surface of the radial bearing 23. The shaft 3 and the thrust bearing 22 are ferromagnetic materials at ordinary temperature and magnetize the magnet 25 for pressurization in an axial direction, by which magnetical attraction is acted between the shaft 3 and the thrust bearing 22. The magnetic lines of force concentrate near to a revolving shaft near the end of the shaft 3 and the spacing between the end of the shaft 3 and the thrust bearing 22 is filled with the magnetic fluid 29.

